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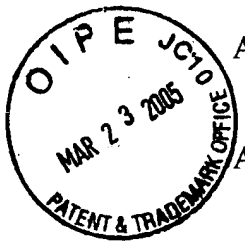

Application/Control No; 10/669,336

Art Unit 2636

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On March 23 – 2005

John Ghazarian

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	John Ghazarian
Application No.	10/669,336
Art Unit	2636
Examiner	Jennifer A. Stone

In response to Patent office objection relating to prior art founding's, election Caused Patent claims 1 – 3 amended.

Even though prior art teachings found to be useful and contains some of teachings found in the present art, it is clear none of the prior art teachings have or represents a safety door system which is designed to avoid human body parts such as finger(s) being caught in between door and door frame, by the use of a door and door frame edge mount conductive material which is designed to sense human touch, attached to a control unit which measure resistive value change caused by human body touch to determine presence of human body parts being located on a door inner frame or door edge.

For example prior art US patent **4,143,367** to Schestag, where a door safety device for limiting the movement of power operated doors, utilizing a resilient member attached to door edge, on contact with the edge of door, the resilient member deforms allowing two electrodes to contact, and gives rise to increased current, which is used as control signal to inhibit further movement of the door.

US Patent **5,799,533** to Seki, et al. where a distributed pressure sensor such that wire-like electrode member is arranged so electrode surface alternately appear on the surface or the rear of a sheet-shaped pressure sensitive electrically conductive material.

US Patent **4,745,301** to Michalchik, where a pressure sensitive electro-conductive material is utilized as a pressure sensitive electro-conductive switch. The switch comprises two electrodes with a deformable pressure sensitive electro-conductive material sandwiched between the electrodes.

US Patent **6,121,869** to Burgess, where a pressure activated switching device includes an electrically insulated standoff position between two conductive layers. The pressure activated switching device is used in safety sensing edge system for a movable door.

US Patent **2002/0088283 A1** to Kume, Where load sensor pinch detection comprises of an elastic conductive tube with a center electrode member is utilized as switching means.

US Patent **2002/0109591 A1** to Tracy et al. where is disclosed a sensing means for controlling the movement of a component which is provided with a sensor, which outputs a signal which varies upon deflection of a sensor.

All above prior art teaching found to be utilizing different methods and skills to provide a safety device, mainly applicable in limiting the movement of doors on contact with an obstacle. By use of pressure sensitive sensor switch means, made of a resilient (Elastic) members having electrodes, the electrodes make contact when resilient member deforms on pressure. As illustrated, prior art teaching are useful in applications such as a garage door, an elevator or rapid transit vehicle door Etc. where a motorized doors having door edge mount pressure-sensing switch, designed for slow moving door closure.
Example, when an obstacle gets caught between a door jam, the elastic material deforms, thus making electrodes to make contact, and the control unit stops the door from closure, or reverse the motor to open the door and provide safety.

Contrary to present invention teaching, where a doorframe and door edge mount conductive material is not necessarily made of resilient material, neither requires to deform under pressure to serve as a safety sensing switch. The Conductive material used in present art is being conductive and is connected to a control unit processor, which is designed to monitor said door edge mount conductive material resistance. When a human body (Limp) parts touches without even putting pressure on said conductive material, the human body resistance causes a change in resistive value of said conductive material, such resistance value changes are detected by said control unit processor, which upon detection transmits an audiovisual alarm signal to warn individual closing the door " not safe to close the door" or in case an electromechanical solenoid door stopper (Not a motor) is being used, the control unit stops the door from closure.

If one presumes, in an automobile or a house door, a method similar to prior art teaching

was used, and a child having there hands or finger touching the vehicle door frame, where prior art "elastic sensor materials" was used as a safety detection member, and presume the child was not pushing hard enough on vehicle door frame mount member to create deformation so the sensor member detects the presence of the child hand, thus no alarm signal is generated by said vehicle safety door control unit. The parent without realizing their child hand or finger is located within said vehicle doorframe, the parent slam's the vehicle door, and childes fingers get caught in said vehicles door jam. The use of prior art safety system in such incident will be a total failure.

Since present art, safety door control unit monitors said door mount conductive material resistive value changes, such as a human body touch generates a resistive value change of said conductive material. If present art was used in the example above where prior art methods were illustrated as an example, the parent will have been warn prior to closing said vehicle door, even if the child was only touching said vehicle door or door frame without the need of pushing hard on sensor member, and childes hand or finger will have been spared from injury.

It is according to primary objective of present invention to provide an improved door safety mechanism which is primarily is designed to prevent unsafe door closure and primarily to avoid bodily injury during a manual door closure, by initiating audiovisual alarms, or by electromechanically (Solenoid gear stopper) stopping a manual door closure, when human body touch is detected by a door frame or door edge mount conductive material, and a control unit is used to ascertain safety door closure.

What is claimed: Amended

1- A method to avoid human body limb(s) from getting caught in a door jam during a door closure, said system comprises;
a doorframe and or a door edge mount conductive material
a electronic control circuitry used to monitor said conductive material resistance
a audio and or visual alarm device.
and a power supply;
Doorframe and or door edge mount conductive material(s), connected to an electronic control circuitry, said electronic control circuitry is connected to an audio and or visual alarm devise.
When said doorframe and or door edge mount conductive material is touched by human body, said conductive material resistive value changes ~~trigger a signal~~. Said electronic circuitry upon receipt of said changed resistive ~~trigger~~ signal, activates said audio and or visual alarm device, to wearn door closing individual and or person touching said door edge or door inner frame ~~edge~~, the presence of human body within said door and doorframe. To prevent accidental door closure on human body limp. ~~of said door on said person touching said door edge or said door frame. inner edge~~

2- A method to automatically avoid human body limb(s) getting caught in a door jam during door closure, said system comprises;
a doorframe and or a door edge mount conductive material.
a electronic control circuitry. For monitoring said conductive material resistance.
a electromechanical doorstopper
and a power supply
Doorframe and or door edge mount conductive material, connected to an electronic control circuitry, said electronic control circuitry is connected to an electromechanical doorstopper installed on said door or doorframe.
When said doorframe and or door edge mount conductive material is touched by

human body limb(s), said conductive material resistive value changes ~~trigger a signal~~, Said electronic control circuitry upon receipt of said changed resistive ~~trigger~~ signal, transmits a signal to activate and or deactivate said electromechanical door stopper, to automatically stop said door closure.

3- A method claimed as in claim 1, wherein said system additionally comprises of an electromechanical doorstopper installed on a doorframe or a door. When said electronic control circuitry receives said ~~trigger~~ changed resistive signal, said electronic control circuitry transmits a signal to activate and or deactivate said electromechanical doorstopper, to automatically stop said door closure.